REMARKS

Claims 1, 2, 5, 11, 12, and 15 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Nakamura (US 6,137,554) in view of Nakamura (US 5,744,197), claims 3 and 13 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Nakamura ('554) in view of Nakamura ('197) and Hattori (US 6,597,424), claims 4 and 14 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Nakamura ('554) in view of Nakamura ('197) and Noguchi (US 5,736,066), and claims 6-10 and 16-20 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Nakamura ('554) in view of Nakamura ('197) and Hashimoto (US 6,657,690). Applicants respectfully traverse these rejections as being based upon references that neither teach nor suggest the combination of features recited by at least independent claims 1 and 11, and hence dependent claims 2-10 and 12-20.

Independent claims 1 and 11 both recite an optically compensated birefringence (OCB) mode liquid crystal display (LCD) device including a liquid crystal material layer "having a splay state when a voltage is not applied and having a bending state when a transition voltage is applied" wherein the liquid crystal material layer "in the splay state has a first retardation value (R1) according to: $1.35 < R1/\lambda < 1.75$," as required by independent claims 1 and 11. Specifically, Applicants respectfully assert that, contrary to the Final Office Action's allegations at page 8 under the heading Response to Arguments, Nakamura ('554) is completely silent with regard to teaching "the retardation, R1, of the OCB type liquid crystal layer without a voltage applied (splay state) as from 0.8-2.0 (Column 3 lines 40-43)." For example, at column 3, lines 40-43 of Nakamura ('554), Nakamura ('554) merely discloses that:

> "In addition, the product of index anisotropy)n of the liquid
> crystal layer of the liquid crystal display device and the thickness
> d is preferable to be 0.8<)nd<2.0."

Accordingly, Applicants respectfully assert that Nakamura ('554) discloses absolutely nothing

regarding "retardation R1, of the OCB type liquid crystal layer **without a voltage applied** (splay

state) as from 0.8-2.0" (emphasis added), as alleged by the Final Office Action.

Moreover, Applicants respectfully assert that, again contrary to allegations made by the

Final Office Action at page 2 under the heading of the rejection, Nakamura ('544) is completely

silent with regard to "the liquid crystal material layer having a splay state when a voltage is not

applied and having a bend state when a transition voltage is applied (Column 7 lines 16-20)."

For example, at column 7, lines 16-20 of Nakamura ('554), Nakamura ('554) merely discloses

that:

> "The discotic liquid crystal film of Examples 1 through 3 and
> Comparative Example 3 has negative)n equal to that of the bend
> liquid crystal, thickness of about one half the bend cell, and exactly
> same orientation as the upper and lower halves of the bend orientation
> of the liquid crystal at the minimum driving voltage 2.2V."

Accordingly, Applicants respectfully assert that Nakamura ('554) says absolutely nothing

regarding "the liquid crystal material layer having *a splay state when a voltage is not applied* and

having a bend state when a transition voltage is applied (Column 7 lines 16-20)" (emphasis

added), as alleged by the Final Office Action.

In addition, Applicants respectfully assert that although <u>Nakamura</u> ('554) may disclose

improving vertical angle viewing characteristics by reducing retardation (Δnd), which is a

product of index anisotropy (Δn) of a liquid crystal layer and its thickness (d), in order to reduce

the optical activity of the liquid crystal layer, <u>Nakamura et al.</u> ('554) fails to teach or suggest a

retardation value (R) of a splay state. Moreover, Applicants respectfully assert that although

<u>Nakamura et al.</u> ('554) may teach that a retardation value may be proportional to a product of the

refractive index anisotropy, the retardation value (R) of the splay state and the retardation value

(Δnd) are not identical, as shown by equation (6) of <u>Nakamura et al.</u> ('197).

Next, Applicants respectfully assert that the Final Office Action contradicts itself upon

admission (page 3, lines 4-5) that "Nakamura '554 fails to disclose the retardation within the

proposed ranges in the splay state, the bend state, and the black state." Accordingly, the Final

Office Action attempts to argue that <u>Nakamura</u> ('197) remedies the deficiencies of <u>Nakamura</u>

('554) by alleging that "Nakamura '197 teaches retardation values within the proposed ranges for

each of the states for an analogous type of optically compensated bend mode display for both of

the bend states." In addition, the Final Office Action further attempts to argue that "Nakamura

'197 teaches a retardation value R2/8 of 0.55 at a minimum applied cell voltage (e.g. 2V,

Column 3 lines 14-30 and Column 4 lines 5-7) for maximum transmittance, or the bend white

state (Table I embodiment 6, red)." Applicants respectfully assert that <u>Nakamura</u> ('197) fails to

teach or suggest anything regarding a liquid crystal material layer "in the splay state has a first

retardation value (R1) according to: $1.35 < R1/\lambda < 1.75$," as required by independent claims 1

and 11.

However, the Office Action concludes that "[b]y applying the relationship to Nakamura '554, one of ordinary skill in the art would have arrived at retardation values for each of the states within the proposed ranges as shown above." Applicants respectfully assert that, for at least the reasons set forth above, Nakamura ('554) and Nakamura ('197) both are completely silent with regard to a liquid crystal material layer "in the splay state has a first retardation value (R1) according to: $1.35 < R1/\lambda < 1.75$," as recited by independent claims 1 and 11. Moreover, Applicants respectfully assert that Nakamura ('554) and Nakamura ('197), whether taken singly or combined, fail to establish a *prima facie* case of obviousness with regard to at least independent claims 1 and 11.

Applicants further respectively assert that the Office Action does not rely upon Noguchi, Hattori, and/or Hashimoto to remedy the deficiencies of Nakamura ('197) and/or Nakamura ('554). Moreover, Applicants respectfully assert that Noguchi, Hattori, and/or Hashimoto cannot remedy the deficiencies of Nakamura ('197) and/or Nakamura ('554), as detailed above.

For the above reasons, Applicants respectfully assert that the rejections under 35 U.S.C. § 103(a) should be withdrawn because Nakamura ('197), Nakamura ('554), Noguchi, Hattori, and/or Hashimoto, whether taken individually or in combination, neither teach nor suggest the novel combination of features clearly recited in independent claims 1 and 11, and hence dependent claims 2-10 and 12-20.

CONCLUSION

In view of the foregoing, Applicants respectfully request reconsideration and the timely

allowance of the pending claims. Should the Examiner feel that there are any issues outstanding

after consideration of the response, the Examiner is invited to contact the Applicants'

undersigned representative to expedite prosecution.

If there are any other fees due in connection with the filing of this response, please charge

the fees to our Deposit Account No. 50-0310. If a fee is required for an extension of time under

37 C.F.R. § 1.136 not accounted for above, such an extension is requested and the fee should also

be charged to our Deposit Account.

Respectfully submitted,

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Dated: July 25, 2005

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